Name:

ml1112paper: Solve by factoring (v1)

1. Solve the equation

$$x^2 - 5x + 4 = 0$$

$$(x-4)(x-1) = 0$$
$$x = 1$$
$$x = 4$$

2. Solve the equation

$$x^2 + 8x + 15 = 0$$

$$(x+3)(x+5) = 0$$
$$x = -5$$
$$x = -3$$

3. Solve the equation

$$6x^2 - 12x + 54 \;=\; 5x^2 + 2x + 9$$

$$x^2 - 14x + 45 = 0$$
$$(x-9)(x-5) = 0$$
$$x = 5$$
$$x = 9$$

4. Solve the equation

$$5x^2 + 2x - 33 \;=\; 4x^2 + 4x - 9$$

$$x^2 - 2x - 24 = 0$$
$$(x+4)(x-6) = 0$$
$$x = 6$$
$$x = -4$$

5. Solve the equation

$$5x^2 + 54x + 81 = 0$$

$$(5x + 9)(x + 9) = 0$$
$$x = -9$$
$$x = \frac{-9}{5}$$

6. Solve the equation

$$5x^2 - 2x - 16 = 0$$

$$(5x + 8)(x - 2) = 0$$
$$x = 2$$
$$x = \frac{-8}{5}$$

7. Solve the equation

$$6x^2 + 39x + 48 \;=\; x^2 - 4x - 8$$

$$5x^2 + 43x + 56 = 0$$
$$(5x + 8)(x + 7) = 0$$
$$x = -7$$
$$x = \frac{-8}{5}$$

8. Solve the equation

$$15x^2 + 69x - 54 \;=\; 4x^2 - x - 5$$

$$11x^2 + 70x - 49 = 0$$
$$(11x - 7)(x + 7) = 0$$
$$x = -7$$
$$x = \frac{7}{11}$$